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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,909	06/15/2001	Nobuhiro Suga	Q64956	6129

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EXAMINER	
MARKS, CHRISTINA M	

ART UNIT	PAPER NUMBER
3713	

DATE MAILED: 03/11/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/880,909	SUGA ET AL.	
	Examiner	Art Unit	
	C. Marks	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Future Correspondence

The Examiner informs the Applicant that for future correspondence the correct Group Art Unit is 3713 and the correct Examiner is C. Marks. This information is important in making sure the Applicant's future correspondence is routed correctly and efficiently, especially during the unit's shift to IFW applications.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the 1) mark-up processing device 2) mark up of an improvised musical operation 3) operation instructions 4) mark-up occurring with each chord and timing 5) evaluation of the player 6) guidance information display device 7) players improvising a duet and 8) time required for playing improvised piece as well as all other claimed limitations not listed above must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings *will not be held in abeyance*.

In response to the Applicant's arguments regarding this objection, the Examiner agrees that all of the listed items presented by the Applicant on page 2, lines 3-8 are shown; however, the listing is not commensurate with the objection. Further, the Examiner is not requiring each claim limitation correspond to a structure, as perceived by Applicant, but that each feature be properly illustrated, which is required by the rules, see 37 C.F.R §1.83, which explicitly states the drawings in a nonprovisional application must show every feature of the invention specified in the claims.

To one skilled in the art, FIG 1 appears to be a computer, FIG 2 a keyboard hooked to a computer, FIG 3 a scoring algorithm, FIG 4 a timing display, FIG 5 progression data, FIG 6 timing data, FIG 7 further timing information, FIG 8 a CD, FIG 9 performance algorithm, FIG 10 a display of a key board, FIG 11 display instructions, FIG 12 sheet music, FIG 13 count instructions, FIG 14 computer with two input sections, FIG 15 ordering chart, FIG 16 display instructions, FIG 17 box with two players identified.

Therefore, as previously asserted by the Examiner, the features are not properly illustrated as required by 37 C.F.R §1.83, which requires that every feature be shown. Regarding Applicant's assertion that 37 C.F.R. §1.83 merely requires illustration of generic structure, not every detailed feature, the Examiner has included the section herein:

§ 1.83 Content of drawing.

(a) The drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box).

As seen above, the rule only states that if detailed illustration is not essential for proper understanding the feature should be illustrated in the form of a graphic symbol or labeled representation, not eliminated or omitted altogether.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 13, 16, 21, and those dependent therefrom are indefinite in that one of ordinary skill in the art would not understand how the mark-up processing device could mark up an improvised musical operation. One of ordinary skill in the art would not be able to ascertain how the system could evaluate a performance that is claimed to be improvised while at the same time be in accordance with an operation instruction displayed. This seems to contradict the fact that the performance is claimed as improvised. One of ordinary skill in the art would understand that an improvised performance is one that created or changed by the musician on the spot. Therefore, one would not be able to understand how such a performance could be evaluated as claimed or how it would be improvised when it is claimed that the player performs related to the operating instructions given.

It is also not clear to one of ordinary skill in the art what is meant by performance operation instruction as it is related to an improvised performance. As stated above, the fact that there is an instruction contradicts the fact that the performance is improvised. There is not positive linkage between the two elements and thus one of ordinary skill in the art would not understand how their relationship affects the other. Further, there is no proper definition in the claims for what is meant by the term marks up. One of ordinary skill in the art would not be able to distinctly and concretely understand the limitation meant by the language and thus it is indefinite.

For examination purposes, the claims will be evaluated as best understood by one of ordinary skill in the art.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-22, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US Patent No. 6,541,692).

Miller discloses a game system that enables a player to play a game (Abstract) for evaluating the accuracy of an operation performed by a player in accordance with an instruction given by the system (Abstract). This instruction is a displayed image of a performance operation in the form of a table of notes (FIG 7A-7D) that appears on a game screen. Though Miller does not disclose the displayed image is an instrument, the manner in which the actual instruction is shown is a design choice that would be obvious to one of ordinary skill in the art. Further, one of ordinary skill in the art would be motivated to display an instrument to follow, as it would be an easier method for allowing a player to follow a musical piece. By displaying an instrument to follow as opposed to merely notes, the beginner would gain a better understanding of how to play the instrument. Miller also discloses that devices exist that use the chord structure of music to set up a system to allow the user to improvise more easily and computer versions of such a system exist (Column 1, lines 50-58). Miller also discloses a mark-up processing in the system that marks up an improvised musical operation (Column 2, lines 51-58) by dynamically composing the song as it plays to allow the player a degree of freedom in performance wherein the degree of freedom comes from not playing the same song repeatedly and using the song in its improvised form. Thus, the actual performance can be compared with the operation instruction of the markup (Column 2, lines 51-57).

Regarding claim 2, the markup of the song can occur wherein the computing device has information about both what the user is supposed to play and what the user is actually playing.

The mark up or score algorithm can then mark up the piece played, defined above to be enabled to be improvised, on the basis of the progression of the performance (Column 4, lines 4-20) as to how well the accuracy of performance was played. The manner and timing in which the analysis occurs would be a design choice of one of ordinary skill in the art, thus it would be obvious to allow the mark up or scoring to occur after each chord, as one of ordinary skill in the art understands the chords are part of a performance, to provide the player with a greater detail in the analysis of their performance.

Regarding claim 3, the score evaluation of the player is increased when a match is made between the chords and notes of the player's performance and that of the preset chords to be played (Column 4, lines 4-20).

Regarding claim 4, the progression of the song to be played is stored in a data structure (Column 7, lines 50-54) and is also stored in a table (FIG 3).

Regarding claim 5, the score and markup of the player is also based on rhythmic accuracy, thus the timing is associated in the markup (Column 4, lines 4-20).

Regarding claim 6, the score evaluation is also increased with the rhythmic accuracy is achieved, thus correct timing is used in markup for the evaluation (Column 4, lines 4-20).

Regarding claim 7, the progression of the song to be played is stored in a data structure (Column 7, lines 50-54) and is also stored in a table (FIG 3). Thus, one of ordinary skill in the art would understand that the timing data would be associated with the progression of the song to properly be stored as one of ordinary skill in the art knows that along with the melodic progression, a song also has a rhythmic or timing wherein the two factors are used together to define the song.

Regarding claim 8, as disclosed above, the markup is based on both the performance chords and the performance timing.

Regarding claim 9, the display device can display guidance in the form of bar graphs (FIG 7B-7D) to further guide the musical performance as to how long each note should be held.

Regarding claim 10, as discussed above, the guidance information dictates how long the player should hold the note, thus the guidance information changes the display image such that the player can understand details of operation to be performed in accordance with the progression of the composition.

Regarding claim 11, the guidance information is for the specific piece of the selection the player is currently playing, thus the player can ascertain the position of the score.

Regarding claim 12, the guidance display can also include chords as multiple notes can be shown (FIG 7A-7D) thus it is showing a correct progression of chords of a musical composition.

Regarding claim 13, the system allows a plurality of players to engage in a game (FIG 12-15; Column 5, lines 26-27). As disclosed above, the system changes dynamically to allow for improvised performances. It also allows the multiple players to play together, analogous to that of a band, thus one of ordinary skill in the art would understand that this would represent a duet when two of the players were allowed to play together.

Regarding claim 14, based upon the scoring function disclosed by Miller and above, one of ordinary skill in the art would understand that by not properly adhering to the timing required for the piece, the player would receive a low score.

Regarding claim 15, the scoring mechanism allows immediate feedback (Column 4, line 44) thus it would axiomatically contain a display that would display the results of the mark up to the player.

Regarding claims 16-22, the limitations discussed above are disclosed, taught or suggested by Miller. It is known to those of ordinary skill in the art to store such functionality into

a computer readable medium that has a program to carry out the process. One of ordinary skill in the art would understand that the functionality carried out by the hardware system of Miller could be incorporated to be controlled by software and such an incorporation would be obvious to one of ordinary skill in the art as it is notoriously well known in the art to store such procedures on a computer readable medium and one of ordinary skill in the art would know how to implement the process in order to store it on the computer readable medium.

Response to Arguments

Regarding the Applicant's argument that the art based rejection is improper based on the 112 rejections, the Examiner respectfully disagrees as the §112 rejections relate to the indefiniteness of the claim language and not that the Examiner misunderstands music as asserted by the Applicant.

Regarding the Applicant's argument of the §112 rejection, the Examiner agrees one of ordinary skill in the art would understand an instrument and a displayed image of that instrument would be used in instructing the player, hence, the associated portion of the §112 has been withdrawn. However, the Examiner still contends that one of ordinary skill in the art would not understand how the mark-up processing device would achieve the mark-up of the improvised piece. There is no support as to how this would be accomplished, only a claim that there is a structure that does this. There is no support as to how this would be accomplished, thus a skilled artisan would not understand how an improvised, on the spot, piece would be marked up. Further, the Examiner also still contends that there is not proper structure linking the performance operation instruction as it is related to the improvised performance to the point where a skilled artisan would understand how their relationship affects the other. Lastly, the Examiner maintains that there is no proper definition for markup in the claims to project to a

skilled artisan what is meant. It would not be understood how such a piece would be "marked up." It is indefinite in that it is not concrete as to what this process entails, such as is the piece actually marked up by showing the player where errors occurred like a teacher would do with a red pen, or does the mark up represent only a score relating to how well the player did, or is the mark up a different means entirely. Though the Applicant refers to FIG 13 to show what markup is, the Examiner contends the figure does not show anything relating to mark up in the manner that the Examiner has cited it to be indefinite.

Regarding Applicant's argument that the patent to Miller is based on an application filed June 28, 2001, the Examiner agrees; however, also points out to the Applicant that Miller claims priority to a provisional application filed July 07, 2000 which predates the Applicant's priority date and is thus prior art. The Examiner has pulled and reviewed the provisional application and it fully and explicitly supports all parts of Miller for which the Examiner has relied upon. Therefore, Applicant's argument that Miller is not prior art is not convincing.

Regarding Applicants argument that Miller is not directed to a game involving experienced players and that Miller is directed to a non-musician, the Examiner states that the argument is not coterminous with what is being claimed, as there is no mention of such a restriction in the claim language. Further, the argument that the invention includes a display that provides guidance rather than relying on the player's ability to improvise is a conclusionary statement as the Examiner does not understand that point the Applicant is attempting to make as the argument is merely a statement of what the Applicant believes about Miller, not as to how Miller fails the actual claim language.

Further, regarding Applicants argument of how Miller differs from the Applicant relating to sound generation, the Examiner maintains that the argument is not coterminous with any actual claim language.

Regarding Applicants argument that there is no improvised performance in Miller, the Examiner respectfully disagrees as Miller states that new songs are quickly and easily composed, thus representing an improvised musical operation, which will be played by the player.

Regarding Applicant's argument that the improvising is thus not by the user, the Examiner states such arguments are not coterminous with the claim language which does not explicitly state that which the Applicant is asserting it does.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on (703)-308-1327. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmm
March 8, 2004

MICHAEL O'NEILL
PRIMARY EXAMINER